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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,658	04/13/2004	Tetsuyo Ohashi	03500.018075	3144

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EXAMINER

COLILLA, DANIEL JAMES

ART UNIT PAPER NUMBER

2854

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/822,658	Applicant(s) OHASHI ET AL.	
	Examiner Daniel J. Colilla	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2004 and 17 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/17/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Beretta et al. (US 5,772,343).

With respect to claim 1, Beretta et al. discloses a both-side recording apparatus including a recording unit 14 and a sheet inversion unit 22-24 that receives a sheet from the recording unit 14 and returns the sheet to the recording unit 14 after a front-back inversion as shown in Figures 2-6 of Beretta et al. Figure 1 of Beretta et al. shows the predetermined conveying path around driving roller 23 in which the recording sheet is inverted. A recorded side of the recording sheet 38 contacts the driving roller 23, as shown in Figures 5-6 of; and a non-recorded side of the recording sheet 38 contacts idler roller 24 (shown in Figure 1 only).

With respect to claim 2, the roller 23 contacting the recorded side has a larger diameter than the roller 24 contacting the non-recorded side as shown in Figure 1 of Beretta et al.

With respect to claim 3, Figures 2-6 show a turn-around path around roller 23 in which the recorded side face an inner side and the non-recorded side faces an outer side so that the recording medium is inverted and has its conveying direction changed from the direction shown in Figure 5 of Beretta et al. (to the left side of the paper) to the direction shown in Figure 6 of Beretta et al. (to the right side of the paper).

With respect to claim 4, Beretta et al. discloses recording by an ink jet process using an ink jet recording head 14.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-6, 8 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beretta et al. (US 5,772,343) in view of Jurrens et al. (US 6,679,599) and Yokoi et al. (US 5,988,809).

With respect to claims 5-6, Beretta et al. discloses the claimed both-side recording apparatus except that the materials from which the rollers are made are not known to the examiner. Beretta et al. discloses a both-side recording apparatus including a recording unit 14 and a sheet inversion unit 22-24 that receives a sheet from the recording unit 14 and returns the sheet to the recording unit 14 after a front-back inversion as shown in Figures 2-6 of Beretta et al. Figure 1 of Beretta et al. shows the predetermined conveying path around roller 23 in which the recording sheet is inverted. A recorded side of the recording sheet 38 contacts a roller 23, as shown in Figures 5-6 of; and a non-recorded side of the recording sheet 38 contacts roller 24. Jurrens et al. teaches a both-side recording apparatus (Jurrens et al., col. 4, lines 51-53) which includes a roller 100 that contacts a recorded side of the recording sheet 106 and a roller 110 that contacts a non-recorded side of the sheet 106 (Jurrens et al., col. 2, lines 50-57). In col. 3, lines 6-

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10, Jurrens et al. discloses that the roller 110 may have a decreased hardness by using a material such as vulcanized rubber for the roller 100. This would create a relatively elastic surface. It would have been obvious to combine the teaching of Jurrens et al. with the both-side printing apparatus disclosed by Beretta et al. for the advantage of the heated roll 100 for drying the printed ink faster. Jurrens et al., however, is silent on the materials used for the roller 110, but does disclose that the roller 110 may be a starwheel roller (col. 3, lines 33-36).

Yokoi et al. teaches a recording apparatus including a starwheel roller (spur) 309 that can have a hard chromium plating (non-elastic) (Yokoi et al., col. 11, lines 15-19). It would have been obvious to combine the teaching of Yokoi et al. with the both-side printing apparatus disclosed by Beretta et al. in view of Jurrens et al. for the advantage of the starwheel roller (spur) that is resistant to wear.

With respect to claim 8, the roller 23 contacting the recorded side has a larger diameter than the roller 24 contacting the non-recorded side as shown in Figure 1 of Beretta et al.

With respect to claim 9, Figures 2-6 show a turn-around path around roller 23 in which the recorded side face an inner side and the non-recorded side faces an outer side so that the recording medium is inverted and has its conveying direction changed from the direction shown in Figure 5 of Beretta et al. (to the left side of the paper) to the direction shown in Figure 6 of Beretta et al. (to the right side of the paper).

With respect to claim 10, Beretta et al. discloses recording by an ink jet process using an ink jet recording head 14.

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5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beretta et al. (US 5,772,343) in view of Jurrens et al. (US 6,679,599) and Yokoi et al. (US 5,988,809) as applied to claims 5-6, 8 and 9-10 above, and further in view of Asada (JP 2001-261181).


Beretta et al. in view of Jurrens et al. and Yokoi et al. discloses the claimed apparatus except for the polymer resin of the non-elastic material. However, Asada discloses that it is known to make a hard (non-elastic) roller 26b in a recording apparatus out of Acetal resin (machine translation of Asada, paragraph [0027], line 8). Acetal is also known as polyacetal, polyoxymethylene (POM), or polyformaldehyde and, therefore is a polymer resin. It would have been obvious to combine the teaching of Asada with the apparatus disclosed by Beretta et al. in view of Jurrens et al. and Yokoi et al. because polymers provide a lightweight and non-corrosive alternative to other materials such as metals.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Colilla whose telephone number is (571) 272-2157. The examiner can normally be reached Mon.-Thur. between 7:30 am and 5:00 pm. Faxes regarding this application can be sent to (703) 872-9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached at (571) 272-2168. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 11, 2005


Daniel S. Colilla
Primary Examiner
Art Unit 2854